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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/044,138 | 01/11/2002 | Mohammad Masghati | 13469 | 1058 |

7590 07/21/2003
Illinois Tool Works Inc.
Patent Department
3600 West Lake Avenue
Glenview, IL 60025

EXAMINER

HA, NGUYEN T

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2831 | |

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,138

Applicant(s)

MASGHATI, MOHAMMAD

Examiner

Nguyen T Ha

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6-9,11,12,14,16,17 and 19 is/are rejected.
- 7) ☒ Claim(s) 3,5,10,13,15,18 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,6-8, 11 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Masghati (5,841,620).

Regarding claim 1, Masghati discloses primary/secondary surge protector circuit for protecting telecommunications equipment and the like from power and transient surges (figures 1-11), comprising:

- a printed circuit board (26);
- a surge protector means (28a-28d);
- said surge protector means being mounted on said printed circuit board (column 4 lines 55-56);
- said printed circuit board having at least one tip (54) conducted trace formed on its surface and extending between an input terminal pin and a first internal node (A) (column 3 lines 10-11) and having at least one ring (56) conductive trace formed on its top surface and extending between an input ring terminal pin and a second internal node (C) (column 3 lines 11-12);

- said surge protector means including voltage suppressor (50) means operatively connected to said tip conductive trace at said first node and to said ring conductive trace at said second node (column 3 lines 15-16); and

- said tip (54) and ring (56) conductive traces defining fusible links, which are opened, when an excessive current is passed there through (figure 10).

Regarding claim 6, Masghati discloses the voltage suppressor means is comprised of a silicon avalanche suppressor (column 5 lines 61-62).

Regarding claim 7, Masghati discloses the voltage suppressor means is comprised of a sidactor (column 5 lines 60-63).

Regarding claim 8, Masghati discloses the voltage suppressor means is comprised of a gas discharge tube (column 5 lines 60-63).

Regarding claim 11, Masghati discloses primary/secondary surge protector circuit for protecting telecommunications equipment and the like from power and transient surges (figures 1-11), comprising:

- a printed circuit board (26);
- surge protector means (28a-28d);
- said surge protector means being mounted on said printed circuit board (column 4 lines 55-56);

- said printed circuit board having at least one tip (54) conducted trace formed on its surface and extending between an input terminal pin and a first internal node (A) and having at least one ring (56) conductive trace formed on its top surface and extending between an input ring terminal pin and a second internal node (C);

Art Unit: 2831

- said surge protector means including voltage suppressor (50) means operatively connected to said tip conductive trace at said first node and to said ring conductive trace at said second node (column 3 lines 15-16);
- said surge protector means further including a first heat coil (36) operatively connected also to said first internal node downstream of said tip conductive trace and a second heat coil (36) operatively connected also to said second internal node downstream of said ring conductive trace; and
- said tip (54) and ring (56) conductive traces defining fusible links, which are opened, when an excessive current is passed there through (figure 10).

Regarding claim 16, Masghati discloses primary/secondary surge protector circuit for protecting telecommunications equipment and the like from power and transient surges (figures 1-11), comprising:

- a tip conductive trace (54) formed on a surface of a printed circuit board;
- a ring conductive trace (56) formed also on the surface of the printed circuit board;
- voltage suppressor (50) means operatively connected between said tip and ring conductor traces for conducting in response to an excessive voltage applied across said tip and ring conductive traces (figure 10); and
- said tip (54) and ring (56) conductive traces defining fusible links, which are opened when an excessive current is passed there through (figure 10).

Claim Rejections - 35 USC § 103

Art Unit: 2831

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims, 2,4,9,12,14,17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masghati (5,841,620).

Regarding claims 2&4, Masghati discloses all the limitation discussed above with respect to claim 16, except for each of said tip and ring conductive traces has uniform width and height dimensions to correspond to a particular gauged wire size.

It would have been obvious matter of design choice to have the tip and ring conductive traces has uniform width and height dimensions, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. ***In re Rose, 105 USPQ 237 (CCPA 1955).***

Regarding claim 9, Masghati discloses all the limitation discussed above with respect to claims 1,2 and 4, except for the width dimension is approximately .040 inches and wherein said height dimension is approximately .0028 inches. It would have been obvious matter of design choice to have the width dimension is approximately .040 inches and wherein said height dimension is approximately .0028 inches, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. ***In re Rose, 105 USPQ 237 (CCPA 1955).***

Regarding claims 12&14, Masghati discloses all the limitation discussed above with respect to claim 16, except for each of said tip and ring conductive traces has uniform width and height dimensions to correspond to a particular gauged wire size. It would have been obvious matter of design choice to have the tip and ring conductive traces has uniform width and height dimensions, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. ***In re Rose, 105 USPQ 237 (CCPA 1955).***

Regarding claims 17&19, Masghati discloses all the limitation discussed above with respect to claim 16, except for each of said tip and ring conductive traces has uniform width and height dimensions to correspond to a particular gauged wire size.

It would have been obvious matter of design choice to have the tip and ring conductive traces has uniform width and height dimensions, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. ***In re Rose, 105 USPQ 237 (CCPA 1955).***

Allowable Subject Matter

5. Claims 3,5,10,13,15,18 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claims, 3,5,10,13,15,18 and 20, the prior art alone or in combination does not teach the limitation of a primary/secondary surge protector,

Art Unit: 2831

wherein each of said tip and ring conductive traces has a first wider section, a second narrow section, and a third wider section, said second narrow section being interconnected between said first and third wider sections.

Citation Relevant of Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Beene discloses reduced signal loss surge protection circuit.
- b. Kaczmarek et al disclose line protection for a communications circuit.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T Ha whose telephone number is 703-308-6023. The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 703-308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3432 for regular communications and 703-305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

NH
July 11, 2003

 7/14/03
DEAN A. REICHARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800